

FAR/JAR 25.1333 (b)
(Final Report)

A. FAR 25.1333(b)

1. What is the underlying safety issue addressed by FAR/JAR?

The requirement ensures that there is sufficient information to the flight crew for safe control of the airplane in the event of a failure condition. It also ensures that the crew work load will not be increased by requiring that essential information to be present without additional crew action.

2. What are current FAR and JAR standards?

Current FAR 25.1333(b):

- (b) The equipment, systems, and installations must be designed so that one display of the information essential to the safety of flight which is provided by the instruments, including attitude, direction, airspeed, and altitude will remain available to the pilots, without additional crew member action, after any single failure or combination of failures that is not shown to be extremely improbable; and

Current JAR 25.1333(b):

- (b) The equipment, systems, and installations must be designed so that sufficient information is available to assure control of the aeroplane in speed, altitude, heading and attitude by one of the pilots without immediate crew action, after any single failure or combination of failures that is not assessed to be extremely improbable (see ACJ 25.1333(b)); and

3. What are the differences in the standards?

- a. The FAR requires one display of the essential information required for safe flight (attitude, direction airspeed, and altitude) while the JAR asks for sufficient information to assure control of attitude, direction, airspeed, and altitude.
- b. The JAR language replaces the word “additional” in phrase “without additional crew action” with the word “immediate” implying that some later crew member action is possible.
- c. The FAR uses “direction” while the JAR uses “heading”.

4. What, if any, are the differences in required means of compliance?

- a. The JAA may require to demonstrate what is the sufficient information required to assure control of the airplane in attitude, direction, airspeed, and altitude.
- b. The FAA requires an analysis to show compliance, while the JAA may accept a combination of analysis and/or demonstration.

AVHWG SRD Harmonization

5. **What is the proposed action?**
Envelope on the FAR/JAR; use the JAR words modified to include the FAR statement "without additional crew action". Also change "speed" to "airspeed".
6. **What should the harmonized standard be?**
(b) The equipment, systems, and installations must be designed so that sufficient information is available to assure control of the airplane airspeed, altitude, heading, and attitude by one of the pilots without additional crew member action, after any single failure or combination of failures that is not assessed to be extremely improbable;
and
7. **How does this proposed standard address the underlying safety issue (identified in #1)?**
Same as stated on #1 above.
8. **Relative to current FAR, does the proposed standard increase, decrease, or maintain the same level of safety?**
Maintains the same level of safety.
9. **Relative to current industry practice, does the proposed standard increase, decrease, or maintains the same level of safety?**
Maintains the same level of safety.
10. **What other options have been considered and why were they not selected?**
The FAR words were considered. However, the proposed wording permits better flexibility in light of the new technologies while maintaining the same safety level.
11. **Who would be affected by the proposed change?**
Non FAA certificated systems.
12. **To ensure harmonization, what current advisory material (e.g., ACJ, AMJ, AC, policy letters) need to be included in the rule text or preamble?**
The AC/AMJ 25-11 and ACJ 25.1333 needs to be reviewed. A harmonized AC/ACJ needs to be developed.
13. **Is existing FAA advisory material adequate?**
See #12 above.
14. **If not, what advisory material should be adopted?**
See #12 above.
15. **How does the proposed standard affect the current ICAO standard?**
The AVHWG is not aware of any..

AVHWG SRD Harmonization

- 16. How does the proposed standard affect other HWG's?**
None affected.
- 17. What is the cost impact of complying with the proposed standard?**
None if the system complies with the FAA requirements.
- 18. Does the HWG want to review the draft NPRM at "Phase 4" prior to publication in the Federal Register?**
Yes.
- 19. In light of the information provided in this report, does the HWG consider that the "fast Track" process is appropriate for this rulemaking project, or is the project too complex or controversial for the "Fast Track" process?**
This project is appropriate for the "Fast Track" process.